



Brian Schweitzer, Governor

P. O. Box 200901

Helena, MT 59620-0901

(406) 444-2544

Website: [www.deq.mt.gov](http://www.deq.mt.gov)

November 19, 2008

Jacqueline Flikkema  
Knife River Corporation  
PO Box 147  
Kalispell, MT 59903

Dear Ms. Flikkema:

Air Quality Permit #2996-05 is deemed final as of November 19, 2008, by the Department of Environmental Quality (Department). This permit is for a portable drum-mix asphalt plant. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

A handwritten signature in cursive script that reads "Vickie Walsh".

Vickie Walsh  
Air Permitting Program Supervisor  
Air Resources Management Bureau  
(406) 444-3490

A handwritten signature in cursive script that reads "Kathleen Doran".

Kathleen Doran, P.E.  
Environmental Engineer  
Air Resources Management Bureau  
(406) 247-4443

VW: kd  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Air Quality Permit #2996-05

Knife River Corporation  
P.O. Box 147  
Kalispell, MT 59903

November 19, 2008



## AIR QUALITY PERMIT

Issued To: Knife River Corporation  
PO Box 147  
Kalispell, MT 59903

Permit #2996-05  
Administrative Amendment (AA)  
Request Received: 01/24/08  
Department Decision on AA: 11/03/08  
Permit Final: 11/19/08  
AFS #777-2996

An air quality permit, with conditions, is hereby granted to Knife River Corporation (Knife River) pursuant to Sections 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### Section I: Permitted Facilities

#### A. Plant Location

Knife River operates a portable drum mix asphalt plant at various locations throughout Montana. The legal description for the initial location of the Knife River facility is the NE $\frac{1}{4}$ , SW $\frac{1}{4}$  of Section 23, Township 30 North, Range 21 West, in Flathead County, Montana. Permit #2996-05 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department)-approved permitting program, those areas considered tribal lands. *A Missoula County air quality permit will be required for all locations within Missoula County, Montana.*

Addendum 6 and Permit #2996-05 apply to the Knife River facility while operating at specific locations in or within 10 kilometers (km) of certain particulate matter less than 10 microns (PM<sub>10</sub>) nonattainment areas during the winter months (October 1 – March 31), as approved by the Department, and at any location in or within 10 km of certain PM<sub>10</sub> nonattainment areas during the summer months (April 1 – September 30). A complete list of the permitted equipment is included in Section I.A. of the permit analysis.

#### B. Current Permit Action

On January 24, 2008, the Department received a request from Knife River to change the name on Permit #2996-04 from JTL Group, Inc. to Knife River. The current permit action will transfer ownership of Permit #2996-04 from JTL Group, Inc. to Knife River and update the permit to reflect current rule references, permit language, permit format, and emission factors.

In addition, Knife River requested that the permit be written in a de minimis-friendly manner.

### Section II: Limitations and Conditions

#### A. Emission Limitations

1. Asphalt plant particulate matter emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

2. Knife River shall not cause or authorize to be discharged into the atmosphere, from the asphalt plant, stack emissions that exhibit an opacity of 20% opacity or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).
3. Knife River shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, any visible emissions that exhibit opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).
4. Knife River shall not cause or authorize to be discharged into the atmosphere, from any non-NSPS affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
5. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.3, and II.A.4 (ARM 17.8.749).
6. Knife River shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308 and ARM 17.8.752).
7. Knife River shall treat all unpaved portions of the haul roads, access roads, and the general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.6 (ARM 17.8.752).
8. Knife River must install, operate, and maintain a baghouse for air pollution control on the drum mix asphalt plant. Knife River must install, operate and maintain a device to measure the pressure drop (magnehelic gauge, manometer, etc.) across the control device. Pressure drop must be measured in inches of water. Knife River must also install, operate, and maintain temperature indicators at the control device inlet and outlet (ARM 17.8.749).
9. Total asphalt plant production shall be limited to 1,058,400 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
10. Operation of the portable drum mix asphalt plant (including the diesel engine-powered generator and associated equipment) shall not exceed 2,646 hours during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
11. Knife River shall not operate more than one diesel engine-powered generator at any given time and the maximum rated design capacity shall not exceed 1167 horsepower (hp) (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Knife River, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels

- shall be approved by the Department (ARM 17.8.749).
13. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities (ARM 17.8.340 and 40 CFR 60, Subpart I).
  14. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines for any applicable diesel engine (ARM 17.8.340, 40 CFR 60, Subpart IIII, ARM 17.8.342, and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

Because asphalt production will be limited to the average production rate achieved during the initial and subsequent compliance source test(s), the test should be performed at the highest production rate practical. Knife River may retest at any time in order to test at a higher production rate (ARM 17.8.105 and ARM 17.8.749).

1. Within 60 days after achieving maximum production rate, but not later than 180 days after initial start up, an initial Environmental Protection Agency (EPA) Methods 1-5 and 9 source test(s) shall be performed on any New Source performance Standard (NSPS)-affected equipment at the asphalt plant to demonstrate compliance with the applicable emission limit(s) in Sections II.A.1, II.A.2, and II.A.3, respectively. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973. After the initial source test, testing shall continue on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department in writing (ARM 17.8.105, ARM 17.8.749, and 40 CFR 60, Subpart A and Subpart I).
2. Pressure drop on the baghouse control device and process temperature must be recorded daily and kept on site according to Sections II.A.8 and II.C.2 (ARM 17.8.749).
3. Pressure drop on the baghouse control device and process temperatures (II.A.8) must be recorded during the compliance source test and reported as part of the test results (ARM 17.8.749).
4. Once a stack test is performed, the asphalt production rate shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).
5. Knife River may retest at a higher production rate at any time in order to achieve a higher allowable production rate (ARM 17.8.749).
6. All compliance source tests shall conform to the requirements of the Montana

Source Test Protocol and Procedures Manual (ARM 17.8.106).

7. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this asphalt plant is moved to another location, an intent to transfer Form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area where the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Knife River shall maintain on-site records showing daily hours of operation, daily production rates, and daily baghouse pressure drop and temperature readings (II.A.8) for the last 12 months. The records compiled in accordance with this permit shall be maintained by Knife River as a permanent business record for at least 5 years following the date of the measurement, must be submitted to the Department upon request, and must be available at the plant for inspection by the Department (ARM 17.8.749).

3. Knife River shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

4. Knife River shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include *the addition of a new emissions unit*, a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

5. Knife River shall document, by month, the asphalt production from the facility. By the 25<sup>th</sup> day of each month, Knife River shall calculate the asphalt production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.9. The information for each of the previous months shall be submitted, along with the annual emission inventory (ARM 17.8.749).

6. Knife River shall document, by month, the hours of operation of the portable drum mix asphalt facility. By the 25<sup>th</sup> day of each month, Knife River shall calculate the hours of operation for the portable drum mix asphalt facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.10. The information for each

of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

7. Knife River shall annually certify that its emissions are less than those that would require the facility to obtain an air quality Title V operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

1. Within 30 days of commencement of construction of any NSPS-affected equipment, Knife River shall notify the Department of the date of commencement of construction of the affected equipment. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart I).
2. Within 15 days of the actual startup date of any NSPS-affected equipment, Knife River shall submit written notification to the Department of the initial startup date of the affected equipment. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973 (ARM 17.8.340 and 40 CFR 60, Subpart A and Subpart I).
3. Within 15 days of the actual startup date of any non-NSPS affected equipment, Knife River shall submit written notification to the Department of the initial startup date of the affected equipment (ARM 17.8.749).

E. Addendum

Knife River shall comply with all conditions in Addendum 6 to Permit #2996-05 when operating in or within 10 km of certain PM<sub>10</sub> nonattainment areas as described in the Addendum 6 (ARM 17.8.749).

Section III: General Conditions

- A. Inspection – Knife River shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Knife River fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as

relieving Knife River of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756)

- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Knife River may be grounds for revocation of this permit, as required by that section and rules adopted by the Board.
- H. Construction Commencement – Construction must be begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Knife River shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.



Permit Analysis  
Knife River Corporation  
Permit #2996-05

I. Introduction

A. Permitted Equipment

Knife River Corporation (Knife River) operates a portable Asphalt Plant (maximum capacity 400 tons per hour (TPH)) with a baghouse, an 1167 horsepower (hp) engine-powered generator, and associated equipment.

B. Process Description

A typical operation for the drum mix asphalt plant begins by loading gravel into the feed bin. The gravel is then conveyed to the asphalt plant drum. The gravel is mixed with hot oil in the asphalt plant to create asphalt. Hot asphalt then exits the plant and is transported to the current project site.

C. Permit History

On March 2, 1998, A-1 Paving submitted a complete permit application to operate a portable 1998 CMI Drum Mix Asphalt Plant (maximum capacity 500 TPH) with a baghouse; a 1990 Cummins 600 kW diesel generator; and associated equipment. In addition, A-1 Paving also requested an addendum to operate in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas through September 30, 1998. The application was assigned **Permit #2996-00** and **Addendum 1** was established. The facility was originally located in the NE¼, of the SW¼ of Section 23, Township 30 North, Range 21 West in Flathead County, Montana.

On November 10, 1999, A-1 Paving was issued a permit modification to allow for summer operation (April 1, 2000, through September 30, 2000) in or within 10 km of the following PM<sub>10</sub> nonattainment areas: Libby, Kalispell, Columbia Falls, Butte, Whitefish, and Thompson Falls. **Permit #2996-01** replaced Permit #2996-00 and **Addendum 2** replaced Addendum 1.

On August 10, 2001, A-1 Paving was issued Permit #2996-02. This permit allowed the facility to operate in or within 10 km of certain PM<sub>10</sub> nonattainment areas during the summer months (April 1, 2001 through September 30, 2001). The permit was also updated to reflect the current format used in writing permits. **Permit #2996-02** replaced Permit #2996-01 and **Addendum 3** replaced Addendum 2.

On January 16, 2004, JTL Group Inc. (JTL) submitted a request for an administrative amendment to Permit #2996-03 to change the name from A-1 Paving to JTL. Subsequently, on February 11, 2004, JTL requested that Addendum 3 (which expired on September 30, 2001) be renewed for summertime operations in or within 10 km of certain PM<sub>10</sub> nonattainment areas. In addition, the current permit language and rule references used by the Department of Environmental Quality (Department) were added to the permit. **Permit #2996-03** replaced Permit #2996-02 and **Addendum 4** replaced Addendum 3.

On March 1, 2006, the Department received a request from JTL for an administrative amendment to Permit #2996-03 to allow for wintertime (October 1–March 31) and summertime operations (April 1 – September 30) in or within 10 km of the Kalispell PM<sub>10</sub> nonattainment area. JTL also notified the Department that the process rate for the asphalt plant and the size of the generator were incorrect and the current permit action will update the information to reflect current facility operations. The production rate limitation for the asphalt plant was not based on the 400 TPH maximum design capacity and was not changed from what was provided in Permit #2996-03. However, the asphalt plant production rate limitations in Addendum 5 were based on the 400 TPH maximum design capacity. **Permit #2996-04** replaced Permit #2996-03 and **Addendum 5** replaced Addendum 4.

D. Current Permit Action

On January 24, 2008, the Department received a request from Knife River to change the name on Permit #2996-04 from JTL to Knife River. The current permit action will transfer ownership of Permit #2996-04 from JTL to Knife River and update the permit to reflect current rule references, permit language, permit format, and emission factors. In addition, Knife River requested that the permit be written in a de minimis-friendly manner. **Permit #2996-05** replaces Permit # 2996-04 and **Addendum 6** replaces Addendum 5.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/ Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the permit analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 - General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this in this subchapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-

101, *et seq.*, Montana Code Annotated (MCA).

Knife River shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 - Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standards for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>
11. ARM 17.8.230 Fluoride in Forage

Knife River must comply with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 - Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, Knife River shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere PM caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere PM in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60. This plant consists of a portable 1998 CMI Drum Mix Asphalt Plant (maximum production rate 500 TPH) and associated equipment; therefore NSPS (40 CFR Part 60, Subpart A General Provisions, and Subpart I Hot Mix Asphalt Facilities) applies to the facility.
  - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below.
  - b. 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities This facility is an NSPS-affected facility under 40 CFR 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities), because the facility includes NSPS-affected equipment. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing aggregate; systems for loading, transfer, and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973.
  - c. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE), indicates that NSPS requirements apply to owners or operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE is manufactured after April 1, 2006, and is not a fire pump engine. Since this permit is written in a de minimis friendly manner, this regulation may apply to engines in the future.
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below.
  - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to a National Emission Standard for Hazardous Air Pollutants (NESHAPs) Subpart as listed below.

- b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). As an area source, the diesel RICE will be subject to this rule. However, although diesel RICE engines are an affected source, per 40 CFR 63.5490(b)(3) they do not have any requirements unless they are new or reconstructed after June 12, 2006. Since the permit is written in a de minimis friendly manner, area source provisions of the Maximum Available Control Technology (MACT) requirements may apply to future engines.

D. ARM 17.8, Subchapter 5 - Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit fee is not required for the current permit action because the permit action is considered an administrative permit change.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7 - Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter, or use any asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Knife River has a PTE greater than 15 tons per year of total PM, PM<sub>10</sub>, oxides of nitrogen (NO<sub>x</sub>), volatile organic compounds (VOC), and carbon monoxide (CO); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.

4. ARM 17.8.745 Montana Air Quality Permits—Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Knife River of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.760 Additional Review of Permit Application. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
15. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of intent to transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.
16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to the Department for incineration facilities subject to 75-2-215, MCA.

F. ARM 17.8, Subchapter 8, Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications-- Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this sub-chapter would otherwise allow.

This facility is not a major stationary source since it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 - Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is

defined as any stationary source having:

- a. PTE > 100 tons/year of any criteria pollutant.
- b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
- c. PTE > 70 tons/year of PM<sub>10</sub> in a serious PM<sub>10</sub> nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2996-05 for Knife River, the following conclusions were made:

- a. The facility's PTE is less than 100 tons/year for any pollutant.
- b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
- c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
- d. This facility is potentially subject to area source provisions of a current NESHAP standard (40 CFR 63, subpart ZZZZ).
- e. The facility is currently subject to NSPS standards (40 CFR 60, Subpart I and potentially subject to 40 CFR 60, Subpart IIII).
- f. This source is not a Title IV affected source or a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Knife River is not subject to Title V Operating Permit requirements because federally enforceable limitations have been established that limit the source's PTE below the major source threshold. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Knife River will be required to obtain an operating permit

- h. ARM 17.8.1204(3). The Department may exempt a source from the requirements to obtain an air quality operating permit by establishing federally enforceable limitations that limit the source's PTE:
  - i. In applying for an exemption under this section, the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.
  - ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 17.8.1204(3) shall contain



certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

### III. BACT Determination

A BACT determination is required for any new or altered source. Knife River shall install on the new or altered source the maximum air pollution control capability which is technologically practicable and economically feasible, except that BACT shall be utilized. The current permit action is an administrative action and does not involve the addition of any new or altered equipment to the existing plant; therefore, a BACT analysis is not required.

### IV. Emission Inventory

Source	Tons/yr					
	PM	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
Asphalt Plant w/Baghouse (up to 400 TPH)	10.44	12.17	29.11	16.93	68.80	30.69
Elevators, Screens, Bins, and Mixer	1.91	1.16	-	-	-	-
Cold Aggregate Handling	0.07	0.02	-	-	-	-
Haul Roads	5.48	2.46	-	-	-	-
Diesel Generator (1167 hp)	3.40	3.40	47.86	3.81	10.31	3.17
Total	21.30	19.21	76.97	20.74	79.11	33.86

Note:

Knife River is limited to 2646 hrs/yr for this facility. Knife River has limitations on asphalt production and diesel generator operation to maintain emissions below major source thresholds.

#### **Drum Mix Asphalt Plant Dryer**

##### Operating Parameters

Operating Hours:	2646 hr/yr (Permit Limit)
Process Rate:	400 TPH (Maximum Design)
Plant Elevation:	3000 ft
Actual Pressure:	26.82 in. Hg
Standard Pressure:	29.92 in. Hg
Flowrate:	39400 acfm
Standard Temperature:	68 <sup>0</sup> F = 528 <sup>0</sup> R
Stack Temperature:	350 <sup>0</sup> F = 810 <sup>0</sup> R
Correction Equation:	V1 = V2 (P2/P1)(T1/T2)

Corrected Flowrate:  $39400 \text{ acfm} * (26.82 \text{ in. Hg}/29.92 \text{ in. Hg}) * (528^0\text{R}/810^0\text{R}) = 23022 \text{ dscfm}$

##### ***PM Emissions***

Emission Factor: 0.04 gr/dscf (BACT Determination)

##### Calculations:

$0.04 \text{ gr/dscf} * 23022 \text{ dscfm} * 1 \text{ lb}/7000 \text{ gr} * 60 \text{ min/hr} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 10.44 \text{ ton/yr}$

##### ***PM<sub>10</sub> Emissions***

##### Emission Factor:

0.023 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter Control, 03/04)

Calculations:  $0.023 \text{ lb/ton} * 400 \text{ TPH} * 2646 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 12.17 \text{ ton/yr}$

##### ***NO<sub>x</sub> Emissions***

Emission Factor: 0.055 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.055 \text{ lb/ton} * 400 \text{ TPH} * 2646 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 29.11 \text{ ton/yr}$

#### ***VOC Emissions***

Emission Factor: 0.032 lb/ton (AP-42, Section 11.1, Table 11.1-8, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.032 \text{ lb/ton} * 400 \text{ TPH} * 2646 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 16.93 \text{ ton/yr}$

#### ***CO Emissions***

Emission Factor: 0.13 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.13 \text{ lb/ton} * 400 \text{ TPH} * 2646 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 68.80 \text{ ton/yr}$

#### ***SO<sub>x</sub> Emissions***

Emission Factor: 0.058 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.058 * 400 \text{ TPH} * 2646 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 30.69 \text{ ton/yr}$

### **Elevators, Screens, Bins, and Mixer**

#### **Operating Parameters**

Operating Hours: 2646 hrs/yr (Permit Limit)

Process Rate: 400 TPH (Maximum Design)

#### ***PM Emissions***

Emission Factor: 0.0036 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.0036 * 400 \text{ TPH} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 1.91 \text{ ton/yr}$

#### ***PM<sub>10</sub> Emissions***

Emission Factor: 0.0022 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.0022 \text{ lb/ton} * 400 \text{ TPH} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 1.16 \text{ ton/yr}$

### **Cold Aggregate Handling**

#### **Operating Parameters**

Operating Hours: 2646 hrs/yr (Permit Limit)

Process Rate: 400 TPH (Maximum Design)

#### ***PM Emissions***

Emission Factor: 0.00014 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.00014 \text{ lb/ton} * 400 \text{ TPH} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 0.07 \text{ ton/yr}$

#### ***PM<sub>10</sub> Emissions***

Emission Factor: 0.000046 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.000046 \text{ lb/ton} * 400 \text{ TPH} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

### **Diesel Generator**

#### **Operating Parameters**

Operating Hours: 2646 hrs/yr (Permit Limit)

Engine Size: 1167 hp (Permit Limit)

#### ***PM Emissions***

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)

Calculations:  $0.0022 \text{ lb/hp-hr} * 1167 \text{ hp} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 3.40 \text{ ton/yr}$

***PM<sub>10</sub> Emissions***

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)

Calculations:  $0.0022 \text{ lb/hp-hr} * 1167 \text{ hp} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 3.40 \text{ ton/yr}$

***NO<sub>x</sub> Emissions***

Emission Factor: 0.031 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)

Calculations:  $0.031 \text{ lb/hp-hr} * 1167 \text{ hp} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 47.86 \text{ ton/yr}$

***VOC Emissions***

Emission Factor: 0.00247 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, 10/96)

Calculations:  $0.00247 \text{ lb/hp-hr} * 1167 \text{ hp} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 3.81 \text{ ton/yr}$

***CO Emissions***

Emission Factor: 0.00668 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, 10/96)

Calculations:  $0.00668 \text{ lb/hp-hr} * 1167 \text{ hp} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 10.31 \text{ ton/yr}$

***SO<sub>x</sub> Emissions***

Emission Factor: 0.00205 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, 10/96)

Calculations:  $0.00205 \text{ lb/hp-hr} * 1167 \text{ hp} * 2646 \text{ hrs/yr} * 0.0005 \text{ ton/lb} = 3.17 \text{ ton/yr}$

**Haul Roads**

Operating Parameters

Vehicle Miles Traveled: 5 VMT/day

Days per year: 365 days/yr

***PM Emissions***

Emission Factor: 6.0 lb/VMT (DEQ Policy Statement – Haul Road Emission Factors, 4/25/94)

Calculations:  $6.0 \text{ lb/VMT} * 5 \text{ VMT/day} * 365 \text{ days/yr} * 0.0005 \text{ ton/lb} = 5.48 \text{ ton/yr}$

***PM<sub>10</sub> Emissions***

Emission Factor: 2.7 lb/VMT (DEQ Policy Statement – Haul Road Emission Factors, 4/25/94)

Calculations:  $2.7 \text{ lb/VMT} * 5 \text{ VMT/day} * 365 \text{ days/yr} * 0.0005 \text{ ton/lb} = 2.46 \text{ ton/yr}$

**V. Existing Air Quality Impacts**

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM<sub>10</sub>. Due to exceedance of the national standards for PM<sub>10</sub>, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM<sub>10</sub>. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM<sub>10</sub> State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be the major contributors to PM<sub>10</sub> emissions.

Permit #2996-05 and Addendum 6 are for a portable drum mix asphalt plant that proposes to originally locate at sites in or within 10 km of certain PM<sub>10</sub> nonattainment areas. The more stringent operating conditions contained in the addendum will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards. Also, this facility is a portable source that would operate on an intermittent and temporary basis and any effects on air quality will be minor and short-lived.

**VI. Ambient Air Quality Impacts**

Based on the information provided and the conditions established in Permit #2996-05, the amount of controlled emissions generated by the operation of this facility will not exceed any set ambient air quality standards. The conditions in Permit #2996-05 will be protective of air quality while Knife River is operating at locations not located in or within 10 km of certain PM<sub>10</sub> nonattainment areas. The limitations and conditions established in Addendum 6 would further reduce emissions in the nonattainment areas and would be protective of the ambient air quality standards. Lastly, this facility is a portable source that would operate on an intermittent and temporary basis, so any air quality impacts will be minimal and short-lived.

## VII. Ambient Air Impact Analysis

The Department determined, based on the relatively small amount of controlled emissions generated by the operation of this Knife River facility and the limits and conditions established in Permit #2996-05, that the impact from this permitting action will be minor. In addition, this source is portable and any air quality impacts will be minimal and short-lived.

## VIII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 2-10-105, MCA, the Department conducted a private property taking and damaging assessment.

YES	NO	
		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit

## VIII. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an environmental assessment is not required.

Addendum 6  
Knife River Corporation.  
Permit #2996-05

An addendum to air quality Permit #2996-05 is issued to Knife River Corporation. (Knife River), pursuant to Sections 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment:

Knife River owns and operates a facility consisting of a portable asphalt plant - maximum capacity of 400 tons per hour (TPH) with a baghouse, an 1167 horsepower (hp) diesel engine-powered generator, and associated equipment.

At the request of the permittee, this permit has been written in a de minimis-friendly manner for use in both attainment and nonattainment areas.

II. Seasonal and Site Restrictions

Addendum 6 applies to the Knife River facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas (NAA). Additionally, seasonal and site restrictions apply to the facility as follows:

- A. During the winter season (October 1–March 31) – The only location(s) in or within 10 km of PM<sub>10</sub> NAAs where Knife River may operate is:
- NW ¼ of the NW ¼ of Section 22, Township 29 North, Range 21 West.
  - Any other site that may be approved, in writing, by the Department of Environmental Quality (Department).
- B. During the summer season (April 1–September 30) – Knife River may operate at any location in or within 10 kilometers of the Butte, Columbia Falls, Kalispell, Libby, Thompson Falls, and Whitefish PM<sub>10</sub> NAAs.
- C. Knife River shall comply with the limitations and conditions contained in Addendum 6 to Permit #2996-05 while operating in or within 10 km of any of the previously identified PM<sub>10</sub> NAAs. Addendum 6 shall be valid until revoked or modified. The Department of Environmental Quality (Department) reserves the authority to modify Addendum 6 at any time based on local conditions of any future site. These conditions may include, but are not limited to, local terrain, meteorological conditions, proximity to residences or other businesses, etc.

III. Limitations and Conditions

- A. Operational Limitation and Conditions – **Summer Season (April 1 – September 30)**
1. Asphalt plant particulate matter (PM) emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).
  2. All visible emissions from the asphalt plant stack shall be limited to 10% opacity (ARM 17.8.749).

3. Knife River shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; or the loading, transfer, and storage systems associated with emission control systems, any visible emissions that exhibit an opacity of 10% (ARM 17.8.749).
4. Knife River shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant, as necessary to maintain compliance with the opacity limitation (ARM 17.8.749).
5. Asphalt plant production shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).
6. During the summer season, asphalt plant production shall be limited to 2900 tons per day (ARM 17.8.749).
7. During the summer season, Knife River shall not operate more than one diesel engine-powered generator at any given time. The maximum rated design capacity of that diesel engine-powered generator shall not exceed 1167 hp and shall not be operated more than 7.25 hours per day (ARM 17.8.749).

**B. Operational Limitation and Conditions – Winter Season (October 1– March 31)**

1. Asphalt plant PM emissions shall be limited to 0.04 gr/dscf (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).
2. Knife River shall not cause or authorize to be discharged into the atmosphere from the facility any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).
3. Knife River shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; or the loading, transfer, and storage systems associated with emission control systems, any visible emissions that exhibit an opacity of 10% or greater (ARM 17.8.749).
4. Knife River shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant, as necessary to maintain compliance with the 10% opacity limitation (ARM 17.8.749).
5. Asphalt plant production shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).
6. During the winter season, asphalt plant production shall be limited to 2000 tons per day (ARM 17.8.749).
7. Knife River shall not operate more than one diesel engine-powered generator at any given time. The maximum rated design capacity of that diesel engine-powered generator shall not exceed 1167 hp and shall not be operated more than 5.0 hours per day (ARM 17.8.749).

C. Operational Reporting Requirements

1. If this portable hot mix asphalt plant is moved to another nonattainment location, an intent to transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move (ARM 17.8.749).

The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Production information for the sites covered by this addendum must be maintained for 5 years and submitted to the Department with the annual emissions inventory upon request. The information must include (ARM 17.8.749):
  - a. Daily tons of asphalt produced
  - b. Daily hours of operation for the asphalt plant
  - c. Daily hours of operation for each generator engine
  - c. Type and amount of fuel used for the plant and generator
  - d. Fugitive dust information consisting of the total miles driven on unpaved roads for all plant vehicles.
3. Knife River shall document, by day, the daily asphalt production. Knife River shall sum the total asphalt production for the previous day to verify compliance with the limitation(s) in Section III.A.6 and III.B.6. A written report of compliance verification shall be submitted to the Department annually. The report for the previous calendar year may be submitted along with the annual emission inventory (ARM 17.8.749).
4. Knife River shall document, by day, the total hours of operation of the diesel generator engine.. Knife River shall sum the total hours of operation of the diesel generator engine during the previous day to verify compliance with the limitation in Section(s) III.A.7 and III.B.7. A written report of compliance verification shall be submitted to the Department annually. The report for the previous calendar year may be submitted along with the annual emission inventory (ARM 17.8.749).



Addendum 6 Analysis  
Knife River Corporation  
Permit #2996-05

I. Permitted Equipment

Knife River Corporation (Knife River) operates a portable asphalt plant - maximum production rate 500 tons per hour (TPH) with a baghouse, an 1167 horsepower (hp) diesel engine-powered generator, and associated equipment.

II. Permit History

On March 2, 1998, A-1 Paving submitted a complete permit application to operate a portable 1998 CMI Drum Mix Asphalt Plant (maximum capacity 500 TPH) with a baghouse; a 1990 Cummins 600 kW diesel generator; and associated equipment. In addition, A-1 Paving also requested an addendum to operate in or within 10 kilometers (km) of certain (PM<sub>10</sub>) nonattainment areas through September 30, 1998. The application was assigned **Permit #2996-00** and **Addendum 1** was established. The facility was originally located in the NE¼, of the SW¼, of Section 23, Township 30 North, Range 21 West in Flathead County, Montana.

On November 10, 1999, A-1 Paving was issued a permit modification to allow for summer operation (April 1, 2000, – September 30, 2000) in or within 10 km of the following PM<sub>10</sub> nonattainment; Libby, Kalispell, Columbia Falls, Butte, Whitefish, and Thompson Falls. **Permit #2996-01** replaced Permit #2996-00 and **Addendum 2** replaced Addendum 1.

On August 10, 2001, A-1 Paving was issued Permit #2996-02. This permit allowed the facility to operate in or within 10 km of certain PM<sub>10</sub> nonattainment areas during the summer months (April 1, 2001 through September 30, 2001). The permit was also updated to reflect the current format used in writing permits. **Permit #2996-02** replaced Permit #2996-01 and **Addendum 3** replaced Addendum 2.

On January 16, 2004, JTL Group Inc. (JTL) submitted a request for an administrative amendment to Permit #2996-03 to change the name from A-1 Paving to JTL. Subsequently, on February 11, 2004, JTL requested that Addendum 3 (which expired on September 30, 2001) be renewed for summertime operations in or within 10 km of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. In addition, the current permit language and rule references used by the Department of Environmental Quality (Department) were added to the permit. **Permit #2996-03** replaced Permit #2996-02 and **Addendum 4** replaced Addendum 3.

On March 1, 2006, JTL submitted a request from JTL for an administrative amendment to Permit #2996-03 to allow for wintertime (October 1–March 31) and summertime operations (April 1 – September 30) in or within 10 km of PM<sub>10</sub> nonattainment areas. **Permit #2996-04** replaced Permit #2996-03 and **Addendum 5** replaced Addendum 4.

III. Current Permit Action

On January 24, 2008, the Department received a request from Knife River to change the name on Permit #2996-04 from JTL to Knife River. The current permit action will transfer ownership of Permit #2996-04 from JTL to Knife River and update the permit to reflect current rule references, permit language, permit format, and emission factors. In addition, Knife River requested that the permit be written in a de minimis-friendly manner. **Permit #2996-05** replaces Permit # 2996-04 and **Addendum 6** replaces Addendum 5.

IV. Applicable Rules and Regulations

The following are partial quotations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

ARM 17.8, Subchapter 7 - Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

- A. ARM 17.8.749 Conditions for Issuance of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
- B. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
- C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:
  - 1. Written notice of intent to transfer location and proof of public notice are sent to the Department;
  - 2. The source will operate in the new location for a period of less than 1 year; and
  - 3. The source will not have any significant impact on any nonattainment area or any Class I area.

Knife River must submit proof of compliance with the transfer and public notice requirements when they transfer to the locations covered under this Addendum, and will only be allowed to stay in the new location for a period of less than 1 year. Also, the conditions and controls of this Addendum will keep Knife River from having a significant impact on certain PM<sub>10</sub> nonattainment areas covered by this permit.

V. Emission Inventory – Addendum 6

**SUMMER SEASON (APRIL 1 – SEPTEMBER 30)**

Source	Lbs/day*					
	PM	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
Asphalt Plant w/Baghouse (up to 400 TPH)	57.23	66.70	159.50	92.80	377.00	168.20
Elevators, Screens, Bins, and Mixer	10.44	6.38	-	-	-	-
Cold Aggregate Handling	0.41	0.13	-	-	-	-
Haul Roads	30.00	13.50	-	-	-	-
Diesel Generator (1167 hp)	18.61	18.61	262.28	20.90	56.52	17.34
Total	116.69	105.32	421.78	113.70	433.52	185.54

Note:

*Knife River is restricted to maintain emissions below modeling threshold of 547 lb/day.*

**Drum Mix Asphalt Plant Dryer**

Operating Parameters

Operating Hours:	7.25 hrs/day (Permit Limit)
Process Rate:	400 TPH (Maximum Design)
Plant Elevation:	3000 ft
Actual Pressure:	26.82 in. Hg
Standard Pressure:	29.92 in. Hg
Flowrate:	39400 acfm
Standard Temperature:	68°F = 528°R
Stack Temperature:	350°F = 810°R
Correction Equation:	V1 = V2 (P2/P1)(T1/T2)

Corrected Flowrate:  $39400 \text{ acfm} * (26.82 \text{ in. Hg} / 29.92 \text{ in. Hg}) * (528^{\circ}\text{R} / 810^{\circ}\text{R}) = 23022 \text{ dscfm}$

***PM Emissions***

Emission Factor: 0.04 gr/dscf (BACT Determination)

Calculations:

$$0.04 \text{ gr/dscf} * 23022 \text{ dscfm} * 1 \text{ lb/7000 gr} * 60 \text{ min/hr} * 7.25 \text{ hrs/day} = 57.23 \text{ lb/day}$$

***PM<sub>10</sub> Emissions***

Emission Factor:

0.023 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter Control, 03/04)

Calculations:  $0.023 \text{ lb/ton} * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 66.70 \text{ lb/day}$

***NO<sub>x</sub> Emissions***

Emission Factor: 0.055 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.055 \text{ lb/ton} * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 159.50 \text{ lb/day}$

***VOC Emissions***

Emission Factor: 0.032 lb/ton (AP-42, Section 11.1, Table 11.1-8, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.032 \text{ lb/ton} * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 92.80 \text{ lb/day}$

***CO Emissions***

Emission Factor: 0.13 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.13 \text{ lb/ton} * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 377.00 \text{ lb/day}$

***SO<sub>x</sub> Emissions***

Emission Factor: 0.058 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)  
Calculations:  $0.058 * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 168.20 \text{ lb/day}$

### **Elevators, Screens, Bins, and Mixer**

#### Operating Parameters

Operating Hours: 7.25 hrs/day (Permit Limit)  
Process Rate: 400 TPH (Maximum Design)

#### ***PM Emissions***

Emission Factor: 0.0036 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)  
Calculations:  $0.0036 * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 10.44 \text{ lb/day}$

#### ***PM<sub>10</sub> Emissions***

Emission Factor: 0.0022 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)  
Calculations:  $0.0022 \text{ lb/ton} * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 6.38 \text{ lb/day}$

### **Cold Aggregate Handling**

#### Operating Parameters

Operating Hours: 7.25 hrs/day (Permit Limit)  
Process Rate: 400 TPH (Maximum Design)

#### ***PM Emissions***

Emission Factor: 0.00014 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)  
Calculations:  $0.00014 \text{ lb/ton} * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 0.41 \text{ lb/day}$

#### ***PM<sub>10</sub> Emissions***

Emission Factor: 0.000046 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)  
Calculations:  $0.000046 \text{ lb/ton} * 400 \text{ TPH} * 7.25 \text{ hrs/day} = 0.13 \text{ lb/day}$

### **Diesel Generator**

#### Operating Parameters

Operating Hours: 7.25 hrs/day (Permit Limit)  
Engine Size: 1167 hp (Permit Limit)

#### ***PM Emissions***

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)  
Calculations:  $0.0022 \text{ lb/hp-hr} * 1167 \text{ hp} * 7.25 \text{ hrs/day} = 18.61 \text{ lb/day}$

#### ***PM<sub>10</sub> Emissions***

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)  
Calculations:  $0.0022 \text{ lb/hp-hr} * 1167 \text{ hp} * 7.25 \text{ hrs/day} = 18.61 \text{ lb/day}$

#### ***NO<sub>x</sub> Emissions***

Emission Factor: 0.031 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)  
Calculations:  $0.031 \text{ lb/hp-hr} * 1167 \text{ hp} * 7.25 \text{ hrs/day} = 262.28 \text{ lb/day}$

#### ***VOC Emissions***

Emission Factor: 0.00247 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, 10/96)  
Calculations:  $0.00247 \text{ lb/hp-hr} * 1167 \text{ hp} * 7.25 \text{ hrs/day} = 20.90 \text{ lb/day}$

#### ***CO Emissions***

Emission Factor: 0.00668 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, 10/96)  
 Calculations:  $0.00668 \text{ lb/hp-hr} * 1167 \text{ hp} * 7.25 \text{ hrs/day} = 56.52 \text{ lb/day}$

#### ***SO<sub>x</sub> Emissions***

Emission Factor: 0.00205 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, 10/96)  
 Calculations:  $0.00205 \text{ lb/hp-hr} * 1167 \text{ hp} * 7.25 \text{ hrs/day} = 17.34 \text{ lb/day}$

#### **Haul Roads**

Operating Parameters  
 Vehicle Miles Traveled: 5 VMT/day  
 Days per year: 365 day/yr

#### ***PM Emissions***

Emission Factor: 6.0 lb/VMT (DEQ Policy Statement – Haul Road Emission Factors, 4/25/94)  
 Calculations:  $6.0 \text{ lb/VMT} * 5 \text{ VMT/day} = 30.00 \text{ lb/day}$

#### ***PM<sub>10</sub> Emissions***

Emission Factor: 2.7 lb/VMT (DEQ Policy Statement – Haul Road Emission Factors, 4/25/94)  
 Calculations:  $2.7 \text{ lb/VMT} * 5 \text{ VMT/day} = 13.50 \text{ lb/day}$

#### **WINTER SEASON (OCTOBER 1 – MARCH 31)**

Source	Lbs/day*					
	PM	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
Asphalt Plant w/Baghouse (up to 400 TPH)	39.47	46.00	110.00	64.00	260.00	116.00
Elevators, Screens, Bins, and Mixer	7.20	4.40	-	-	-	-
Cold Aggregate Handling	0.28	0.09	-	-	-	-
Haul Roads	30.00	13.50	-	-	-	-
Diesel Generator (1167 hp)	12.84	12.84	180.89	14.41	38.98	11.96
Total	89.79	76.83	290.89	78.41	298.98	127.96
Note: <i>Knife River is restricted to maintain PM<sub>10</sub> emissions below modeling threshold of 82 lb/day.</i>						

#### **Drum Mix Asphalt Plant Dryer**

Operating Parameters  
 Operating Hours: 5.0 hrs/day (Permit Limit)  
 Process Rate: 400 TPH (Maximum Design)  
 Plant Elevation: 3000 ft  
 Actual Pressure: 26.82 in. Hg  
 Standard Pressure: 29.92 in. Hg  
 Flowrate: 39400 acfm  
 Standard Temperature: 68°F = 528°R  
 Stack Temperature: 350°F = 810°R  
 Correction Equation:  $V_1 = V_2 (P_2/P_1)(T_1/T_2)$

Corrected Flowrate:  $39400 \text{ acfm} * (26.82 \text{ in. Hg}/29.92 \text{ in. Hg}) * (528^\circ\text{R}/810^\circ\text{R}) = 23022 \text{ dscfm}$

#### ***PM Emissions***

Emission Factor: 0.04 gr/dscf (BACT Determination)  
 Calculations:  
 $0.04 \text{ gr/dscf} * 23022 \text{ dscfm} * 1 \text{ lb}/7000 \text{ gr} * 60 \text{ min/hr} * 5.0 \text{ hrs/day} = 39.47 \text{ lb/day}$

#### ***PM<sub>10</sub> Emissions***

Emission Factor:

0.023 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter Control, 03/04)  
Calculations:  $0.023 \text{ lb/ton} * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 46.00 \text{ lb/day}$

***NO<sub>x</sub> Emissions***

Emission Factor: 0.055 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.055 \text{ lb/ton} * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 110.00 \text{ lb/day}$

***VOC Emissions***

Emission Factor: 0.032 lb/ton (AP-42, Section 11.1, Table 11.1-8, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.032 \text{ lb/ton} * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 64.00 \text{ lb/day}$

***CO Emissions***

Emission Factor: 0.13 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.13 \text{ lb/ton} * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 260.00 \text{ lb/day}$

***SO<sub>x</sub> Emissions***

Emission Factor: 0.058 lb/ton (AP-42, Section 11.1, Table 11.1-7, Drum Mix, worst-case fuel, 03/04)

Calculations:  $0.058 * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 116.00 \text{ lb/day}$

**Elevators, Screens, Bins, and Mixer**

Operating Parameters

Operating Hours: 5.0 hrs/day (Permit Limit)

Process Rate: 400 TPH (Maximum Design)

***PM Emissions***

Emission Factor: 0.0036 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.0036 * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 7.20 \text{ lb/day}$

***PM<sub>10</sub> Emissions***

Emission Factor: 0.0022 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.0022 \text{ lb/ton} * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 4.40 \text{ lb/day}$

**Cold Aggregate Handling**

Operating Parameters

Operating Hours: 5.0 hrs/day (Permit Limit)

Process Rate: 400 TPH (Maximum Design)

***PM Emissions***

Emission Factor: 0.00014 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.00014 \text{ lb/ton} * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 0.28 \text{ lb/day}$

***PM<sub>10</sub> Emissions***

Emission Factor: 0.000046 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, controlled, 08/04)

Calculations:  $0.000046 \text{ lb/ton} * 400 \text{ TPH} * 5.0 \text{ hrs/day} = 0.09 \text{ lb/day}$

**Diesel Generator**

Operating Parameters

Operating Hours: 5.0 hrs/day (Permit Limit)

Engine Size: 1167 hp (Permit Limit)

***PM Emissions***

Emission Factor: 0.0022 lb/hp-hr (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)

Calculations:  $0.0022 \text{ lb/hp-hr} * 1167 \text{ hp} * 5.0 \text{ hrs/day} = 12.84 \text{ lb/day}$

***PM<sub>10</sub> Emissions***

Emission Factor:  $0.0022 \text{ lb/hp-hr}$  (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)

Calculations:  $0.0022 \text{ lb/hp-hr} * 1167 \text{ hp} * 5.0 \text{ hrs/day} = 12.84 \text{ lb/day}$

***NO<sub>x</sub> Emissions***

Emission Factor:  $0.031 \text{ lb/hp-hr}$  (AP-42, Section 3.3, Table 3.3-1, diesel fuel, 10/96)

Calculations:  $0.031 \text{ lb/hp-hr} * 1167 \text{ hp} * 5.0 \text{ hrs/day} = 180.89 \text{ lb/day}$

***VOC Emissions***

Emission Factor:  $0.00247 \text{ lb/hp-hr}$  (AP-42, Section 3.3, Table 3.3-1, 10/96)

Calculations:  $0.00247 \text{ lb/hp-hr} * 1167 \text{ hp} * 5.0 \text{ hrs/day} = 14.41 \text{ lb/day}$

***CO Emissions***

Emission Factor:  $0.00668 \text{ lb/hp-hr}$  (AP-42, Section 3.3, Table 3.3-1, 10/96)

Calculations:  $0.00668 \text{ lb/hp-hr} * 1167 \text{ hp} * 5.0 \text{ hrs/day} = 38.98 \text{ lb/day}$

***SO<sub>x</sub> Emissions***

Emission Factor:  $0.00205 \text{ lb/hp-hr}$  (AP-42, Section 3.3, Table 3.3-1, 10/96)

Calculations:  $0.00205 \text{ lb/hp-hr} * 1167 \text{ hp} * 5.0 \text{ hrs/day} = 11.96 \text{ lb/day}$

**Haul Roads**

Operating Parameters

Vehicle Miles Traveled: 5 VMT/day

Days per year: 365 days/yr

***PM Emissions***

Emission Factor:  $6.0 \text{ lb/VMT}$  (DEQ Policy Statement – Haul Road Emission Factors, 4/25/94)

Calculations:  $6.0 \text{ lb/VMT} * 5 \text{ VMT/day} = 30.00 \text{ lb/day}$

***PM<sub>10</sub> Emissions***

Emission Factor:  $2.7 \text{ lb/VMT}$  (DEQ Policy Statement – Haul Road Emission Factors, 4/25/94)

Calculations:  $2.7 \text{ lb/VMT} * 5 \text{ VMT/day} = 13.50 \text{ lb/day}$

**VI. Existing Air Quality Impacts**

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM<sub>10</sub>. Due to exceedance of the national standards for PM<sub>10</sub>, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by EPA as nonattainment for PM<sub>10</sub>. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM<sub>10</sub> State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be major contributors to PM<sub>10</sub> emissions.

Permit #2996-05 and Addendum 6 are for a portable drum mix asphalt plant that proposes to originally locate at sites in or within 10 km of certain PM<sub>10</sub> nonattainment areas. The more stringent operating conditions contained in the Addendum will minimize any potential impact on the nonattainment areas and will protect the NAAQS. Also, this facility is a portable source that would operate on an intermittent and temporary basis and any effects on air quality will be minor and short-lived.

**VII. Air Quality Impacts**

Permit #2996-05 will cover the operations of this portable hot mix asphalt plant while operating at any location within Montana, excluding those counties that have a Department-approved permitting program, those areas that are tribal lands, or those areas in or within 10 km of certain PM<sub>10</sub> nonattainment areas. The initial site location was identified as the NE ¼, of the SW ¼ of Section 23, Township 30 North, Range 21 West in Flathead County, Montana. Addendum 6 to Permit #2996-5 will cover the operations of this portable hot mix asphalt plant, while operating in or within 10 km of certain PM<sub>10</sub> nonattainment areas during the winter months (October 1–March 31) and summer months (April 1 – September 30). Thus, the limitations and conditions established in Addendum 6 would further reduce emissions in these areas and would be protective of the ambient air quality standards. In addition, this source is portable and any air quality impacts will be minimal.

#### VIII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 2-10-105, MCA, the Department conducted a private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit.

#### IX. Environmental Assessment



An environmental assessment was not required for this permit action because the permit action is considered an administrative amendment.

Analysis Prepared By: K. Doran

Date: 10/07/08